

REMARKS

Claims 1-32 were presented for examination. The Office Action mailed September 8, 2010 rejects claims 1-32. Applicants herein cancel claims 1-32 and add new claims 33-43. Claims 33-43 are pending in the application after entry of this paper.

Applicants herein amend the title and the abstract to more clearly represent the invention as now set forth in new claims 33-43.

Objection to Specification

The Office Action objects to the abstract of the disclosure “because the Abstract includes legal phraseology such as “comprises” and “means”. Reference is made to MPEP §608.01(b).

Applicants herein replace the originally-filed Abstract with a substitute Abstract that more clearly addresses the invention as recited in the new claims introduced by this paper. Applicants submit that the Abstract as now set forth does not include the legal phraseology such as that present in the originally-filed Abstract and therefore is not subject to the objection.

Objections to Claims 13, 14 and 30

The Office Action objects to claims 14 and 30 because the first line of each of these claims recites “a” instead of “an”. Applicants herein cancel claims 13, 14 and 30 thereby rendering the objection to these claims moot.

Rejection of Claims 1 and 17 under 35 U.S.C. §112

The Office Action rejects claims 1 and 17 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

Applicants herein cancel claims 1 and 17 thereby rendering the rejection under 35 U.S.C. §112, second paragraph, moot.

Rejection of Claims 1-10 and 17-26 under 35 U.S.C. §103(a)

The Office Action rejects claims 1-10 and 17-26 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 4,387,736 to Major (hereinafter "Major") in view of U.S. Patent Application Publication No. 2005/0115840 by Dolan (hereinafter "Dolan").

Applicants herein cancel claims 1-10 and 17-26 thereby rendering the rejection of these claims moot. To the extent that the Examiner may apply the cited references against new claims 33-43, Applicants provide the following comments.

Major discloses a fluid control apparatus for use in a high pressure chromatography system. Major describes and shows an assembly that includes a pair of check valves in series. Each check valve includes a valve assembly seal, for example, element 28 for the lower check valve shown in FIG. 3. Pressure is exerted on the seal 28 by a mounting block 12 in the vicinity of a boss 26. Deformation of the seal material (which is said to be of any suitable plastics material) occurs to form a fluid tight connection between the inlet valve assembly and the valve seat 32.

Applicants' independent claim 33 is directed to a fluid control device. One end of a valve chamber that is defined within a housing is closed by an end cap. The housing and the end cap each has an abutment surface that receives the other abutment surface and at least one of these abutment surfaces has a plastic seal coating. Claim 33 further recites a compression means that engages the end cap to deform the plastic seal coating between the abutment surfaces to seal the chamber.

In contrast to Applicants' plastic seal coating, the valve assembly seal 28 disclosed in Major is an annulus that surrounds a valve seat 32. Although the seal is deformed by compression, the deformation is not between abutting surfaces of the housing and the end cap. In addition, the seal is not formed by a deformable plastic seal coating. One of skill would not look to replace the seal 28 disclosed in Major with a plastic seal coating as a coating is generally understood to be a thin layer of material and therefore cannot be shaped to provide the annular recess necessary to accommodate the boss 36.

The Office Action relies upon Dolan to show a PTFE coating. Regardless of whether or not Dolan shows this limitation, Dolan does not teach or suggest the limitations identified above as missing from the disclosure of Major.

At least for the reasons set forth above, Applicants' respectfully submit that the device according to new claim 33 is novel and non-obvious over the references cited against originally-filed claim 1. Claims 34-43 depend from base claim 33 and therefore include all the limitations of the base claim. Thus claims 34-43 are novel and non-obvious over the references cited against originally-filed claim 1 at least for the reasons provided with respect to claim 33.

Rejection of Claims 11-16 and 27-32 under 35 U.S.C. §103(a)

The Office Action rejects claims 11-16 and 27-32 under 35 U.S.C. §103(a) as being unpatentable over Major and Dolan as applied to claims 1 and 17, and further in view of U.S. Patent No. 4,945,945 to Schmid.

Applicants herein cancel claims 11-16 and 27-32 therefore the rejection of these claims under 35 U.S.C. §103(a) is rendered moot.

CONCLUSION

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims that have not been expressed.

In view of the remarks made herein, Applicants submits that the application is in condition for allowance and request early favorable action by the Examiner.

If the Examiner believes that a telephone conversation with the Applicants' representative would expedite allowance of this application, the Examiner is cordially invited to call the undersigned at (508) 303-2003.

Respectfully submitted,

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